UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

National Starch and Chemical Investment Holding Corporation, Penford Australia Ltd. and Penford Holdings Pty,		
	Plaintiffs,	
v.		Civil Action No. 04-1443-GMS
Cargill Corporation and MGP Ingredients, Inc.		
	Defendants.	

PLAINTIFFS' ANSWERING BRIEF ON CLAIM CONSTRUCTION

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I. INTRODUCTION

A patent claim is not an amorphous lump of clay on a pottery wheel, to be shaped by the hands of an infringer to any form that suits its purpose. Rather, a claim is born with a distinct form and substance, defined by the plain words of the claim as informed by the intrinsic record, if needed. *See, e.g., Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1583 (Fed. Cir. 1996). Defendants want to reshape the asserted claims in the '454 and '840 patents to import into them a presently-undisclosed, but no doubt carefully crafted test (or tests) for amylose content that they hope will enable them to escape their embrace. That is not an exercise in claim "construction," but one of wholesale claim rewriting. It should be rejected on its face.

The shared specification of the '454 and '840 patents states: *"[f]or the purposes of the description of the invention*, the method by which amylose was determined is set out below." *See* Exhibit 1 at col. 3, lns. 6-7 (emphasis added). The patents then describe (at cols. 3-4) a specific colorimetric iodine analysis (the "Blue Value" test) for determining amylose and equate such amylose content with a measurement of the "apparent amylose" of the inventive starches using that test (*see id.* at col. 3, ln. 8). Table 1 (at col. 9) reports amylose content in terms of the "apparent amylose" of the starch from that same test. Such blunt intrinsic evidence should end any legitimate claims construction inquiry. The specification expressly links the test at columns 3 and 4 to *the description of the invention*, which is defined by the claims. Thus, the claim terms "amylose content" (in the '454 patent) and "apparent amylose content" (in the '840 patent) both mean the "apparent amylose content" of the starch, as measured by one of ordinary skill in the art using the colorimetric analysis test at columns 3-4. It is that simple.

Nevertheless, without any textual basis in the language of the claims themselves or true guidance from the intrinsic record, defendants urge that "amylose content" and "apparent amylose content" both mean "amylose content as measured by at least any colorimetric iodine

analysis." According to defendants, their argument is supported by the prosecution history of the two patents and because it was "commonly understood in the prior art [that] amylose content [w]as measured by a variety of methods." *See, e.g.,* Def. Br. at 1. The prosecution history provides no such support, and certainly not when weighed against the express definition of these claim terms in the specification. Moreover, existence of a "variety of methods" in the prior art to measure apparent amylose content actually supports *plaintiffs'* position. It underscores the significance to claim construction of the inventors having selected a single such test method (at cols 3-4) from that variety to distinctly define the apparent amylose content (and amylose content) of their claimed invention.

II. ARGUMENT

A. The Shared Specification Defines "Amylose Content" and "Apparent Amylose Content" in Terms of the "Apparent Amylose (Blue Value) Test"

In properly construing patent claims, the central focus in all phases of analysis is the language of the claims themselves. *Interactive Gift Express, Inc. v. Compuserve, Inc.* 256, F.3d 1323, 1331 (Fed. Cir. 2001). "The claims, of course, do not stand alone, [but] are part of 'a fully integrated written instrument,' consisting principally of a specification that concludes with the claims [and] [f]or that reason, claims 'must be read in view of the specification, of which they are a part.'" *Phillips v. AWH Corp.*, 415 F.3d 1303, 1315 (Fed. Cir. 2005) (*citing Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 978-79 (Fed. Cir. 1995) (en banc), *aff'd*, 517 U.S. 370 (1996)). The patent specification "acts as a dictionary when it expressly defines terms used in the claims or when it defines terms by implication." *Vitronics*, 90 F.3d at 1582.

Here, the '454 and the '840 patent specification defines the meaning of "amylose content" and "apparent amylose content" for the purpose of the invention:

> *For the purpose of the description of the invention, the method by which amylose was determined is set out below.*
> Method: Apparent Amylose (Blue Value).

Exhibit 1 at col. 3, lines 5-10 (emphasis added). The patent specification proceeds to define in detail the "apparent amylose blue value method" ("Blue Value test"). The specification defines the reagents, the procedure, and even the method for separating starch from the maize grain. *Id.* at col. 3, line 11 – col. 4, line 35. One of ordinary skill in the art simply could not ask for more specific guidance as to the meaning of "amylose content" and "apparent amylose content"—they are expressly defined as the apparent amylose measured using the test at columns 3 and 4 of these patents.

When the applicant presents such a specific definition of a claim term, as here, the inventor's lexicography must govern. *Philips*, 415 F.3d at 1316; *Markman*, 52 F.3d at 979 ("the description may act as a sort of dictionary, which explains the invention and may define terms used in the claims"). The specification is considered "the single best guide to the meaning of a disputed claim term." *Wright Medical Tech. v. Osteonics Corp.*, 122 F.3d 1440, 1443 (Fed. Cir. 1997). As explained by the Federal Circuit:

> the descriptive part of the specification aids in ascertaining the scope and meaning of the claims inasmuch as the words of the claims must be based on the description. The specification is, thus, the primary basis for construing the claims.

Standard Oil Co. v. Am. Cyanmid Co., 774 F.2d 448, 452 (Fed. Cir. 1985), *accord Phillips*, 415 F.3d at 1315.

For example, in *Chimie v. PPG Indus.*, 402 F.3d. 1371, 1378-79 (Fed. Cir. 2005), the patent claims were directed to a "dust-free and non-dusting" silica particles, which apparently achieved enhanced flowability. A major issue was whether the defendants' silica was "dust-free and non-dusting," and the parties disputed how the defendants were to measure whether its silica was "dust-free or non-dusting." At the *Markman* hearing, the patentee argued for a loose construction of the term in the hope of casting a wider net, whereas the defendant argued that the

term should be tied to the only test, DIN 53 583, referenced in the specification of the patent. Agreeing with the defendant, the District Court adopted "'a construction based upon the only meaningful guidance provided in the patent,' namely the DIN test." *Id.* at 1366. On appeal, the patentee challenged the court's construction on the ground that the DIN 53 583 standard was not the only means by which to assess the amount of dust product by the invention, but the Federal Circuit affirmed and held that it was "not improper for the district court to limit the scope of this relative term to the only disclosure on the subject made in the patent." *Id.* at 1380.[1]

Like *Chimie*, the shared specification of the two patents-in-suit in this case provides unequivocal guidance for ascertaining the meaning of the claim terms "amylose content" and "apparent amylose content." That guidance properly cannot be ignored.

B. The Other Tests for Amylose Content Within the Two Patents and Outside of Them Are Irrelevant to the Claim Construction Analysis

Flouting the clear guidance of the shared specification, defendants argue that this specification "refers to at least two different colorimetric methods and one potentiometric method to measure the apparent amylose content of corn starch." *See* Def. Br. at 7. However, *there is no such potentiometric method mentioned anywhere in the shared specification*, and the second colorimetric mentioned by defendants is simply illusory.

Defendants point to the Cluskey reference (an article mentioned in the shared specification) as disclosing a second, different colorimetric method from the one defined in the

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1 Defendants attempt to rely on a statement taken out-of-context from *Phillips*, 415 F.3d at 1323, pointing to the prohibition therein of "confining claims to" a specific embodiment described in the specification as requiring this Court to find that the Blue Value test at columns 3 and 4 does not limit the meaning of "apparent amylose content" in the patents. *See* Def. Br. at 14. The Federal Circuit spoke to this issue in the context where an alleged infringer wrongfully tries to incorporate limitations (based on particular embodiments named in the patent specification) into the claims in order to avoid infringement. That situation is inapposite. The Blue Value Test is not an *embodiment* of any claim, it is a *definition* of one claim term of the invention.

specification at columns 3 and 4. But the two patents-in-suit do not cite the Cluskey article for its method of measuring amylose content, much less tie that method in any respect to the meaning of any term in the patents' claims. Rather, the patents refer to the Cluskey article solely as an example of one researcher who once believed that smaller starch granules contained higher amylose content, which the inventors explain was wrong:

> For example, Cluskey et al . . . reported on the fractionation of dent corn and amylomaize starch granules. They found that an inverse relationship existed between granule size and iodine binding capacity in the amylomaizes. . . . Surprisingly, this was found to be incorrect.

Col. 2, lines 18- 51 (full citation omitted). This is hardly the type of specification statement that defines a claim term, particularly one that it does not even mention.

Despite that, having dug up the 1980 Cluskey article for their brief, defendants first state that it used a different and older colorimetric method to measure amylose than the one defined by the specification of the two patents-in-suit. Defendants next suggest that the mere mention of Cluskey in the shared specification automatically discloses a second competing method for measuring amylose according to the '454 and '840 patents, thereby broadening the asserted claims to include "at least any colorimetric iodine analysis." *See* Def. Br. at 9, 14-15. While imaginative, defendants' effort has nothing to do with proper claim construction and, indeed, such efforts have been roundly rejected by courts before. *See, e.g, Chimi*, 402 F.3d. 1379 (rejecting a second test mentioned in the patent specification cited for an incidental point). This court should do the same.

C. The Prosecution History Does Not Alter the Claims' Meanings or the Test Definition Provided by the Specification

Courts may also look to the prosecution history of a patent for guidance on claim construction. *See Markman*, 52 F.3d at 979. However, it has been wisely cautioned that:

> [B]ecause the prosecution history represents an ongoing negotiation between the PTO and the applicant, rather than the final product of that negotiation, it often lacks the clarity of the specification and thus is less useful for claim construction purposes.

Phillips, 415 F.3d at 1317. In this case, nothing in the prosecution history of either patent contradicts the meaning of the test defined in the specification or the impact of that definition on a proper claim construction.[2]

During the prosecution of the '840 patent, the Examiner cited the Senti reference as prior art against the proposed claims, and stated that Senti:

> relies on amylose determination based on iodine affinity such as colorimetric, as in the instant application, or potentiometric. The prior art measure this 'apparent' amylose by iodine affinity also. Interpreting the claims in light of the specification, the instant claims must be read as "...maize starch having an amylose content of more than 80%, *as measured by colorimetric iodine analysis*. . . ." Senti teaches maize starch containing 85% amylose as measured by colorimetric iodine affinity analysis and gel composition made therewith.

See Nelson Wills Decl. Ex. 4 at A67-68. Despite the Examiner's statements to the contrary, Senti never specifies how amylose should be measured.[3] The Examiner also never stated that the pending claims in the '840 patent should be interpreted to include "at least any colorimetric iodine analysis" as suggested by defendants (and, therefore, applicants did not "acquiesce" to such a view as defendants also state – *see* Def. Br. at 15). Instead, the Examiner merely correctly noted that the specification of the '840 patent measured amylose content by colorimetric iodine

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2 Plaintiffs attach the prosecution histories for each of the relevant applications: (i) Exhibit A is Application No. 08/967,826 for the '840 patent; (ii) Exhibit B is Application No. 08/815,763 for the '454 patent; and (iii) Exhibit C is Application 08/967,826 for U.S. Patent No. 5,714,600 ("the '600 patent"). The application for the '600 patent is the parent of both the '454 and '840 patents.

3 Moreover, the Senti article does not disclose starch containing 85% amylose, but states that "[g]ood progress has been made toward the development of true breeding progeny containing over 80% amylose." Nelson Wills Decl. Ex. 10 at A140. This is not a firm disclosure of fully-developed subject matter, but an invitation to invent such a progeny, which is what the inventors on the '454 and '840 patents ultimately did. Thus, the applicants' subsequent amendment of the claims should not be viewed as agreement with the Examiner's sweeping generalization of the disclosure of Senti, which is proved incorrect when reading that article.

analysis and the claims should be interpreted in light of that disclosure (*i.e.*, in light of the test at columns. 3 and 4, which is precisely what plaintiffs are doing in this case).

The applicants later replaced the 80% amylose content limitation in the pending claims with a limitation of 90.1% "apparent" amylose content and explained:

> In order to avoid [the prior art], Applicants have amended the main claims in this application to indicate that the minimum starch amylose content in the starch is 90.1% as in the original claim 10 and 14, which are believed free of the art. Therefore, it is believed that the enclosed amendments and above remarks are sufficient to place all claims in this application in condition for allowance.

Exhibit A 93-94. There is nothing in the above statement (or any other in the prosecution history) that even remotely suggests that the test at columns 3 and 4 of the asserted patents is being disavowed or altered as the test defining amylose content and apparent amylose content in the claims.

Remarkably, defendants derive the opposite conclusion from the prosecution history, arguing that the above proves that "amylose content" should be measured by "at least any" colorimetric iodine method. In particular, defendants argue that "the prosecution history dictates that the term include amylose content as measured by at least any colorimetric iodine analysis to avoid a large body of prior art." Def. Br. at 1, 14. This makes no sense on its face. The claims cannot have been *narrowed* to "avoid a large body of prior art," as defendants urge, by *broadening* the definition of amylose content and apparent amylose content from the single test at columns 3 and 4 to include "at least any" colorimetric iodine analysis. This stark, internal contradiction further reveals the weakness of defendants' claim construction arguments.

D. Defendants Cannot Use Extrinsic Evidence to Contradict the Plain Meaning or the Intrinsic Evidence

Defendants argue that "apparent amylose content" was commonly understood in the art to mean the amylose amount as measured by "a variety of methods," and then attempt to import all of those test methods ("at least any [test]") into the meaning of amylose content (and

apparent amylose content) in the claims. *See* Def. Br. at 1. In making that argument, defendants point to a number of articles that show various methods for measuring amylose content in starch. Plaintiffs *agree* that many such methods were available for measuring amylose at the time of the invention. That is precisely why the inventors specified in the patents the particular test method (at cols. 3 and 4) to be used in defining amylose content and apparent amylose content for their invention. Thus, the existence of a variety of test methods, coupled with the inventors deliberate selection of one such method from that variety for use in their patents, supports plaintiffs' claim construction position, not defendants'. *See Eastman Kodak Co. v. Goodyear Tire & Rubber Co.*, 114 F.3d 1547, 1554 (Fed. Cir. 1997) (the specification may assist in resolving ambiguity where the ordinary and accustomed meaning of the words used in the claims lack sufficient clarity to permit the scope of the claim to be ascertained from the words alone), *overruled on other grounds by Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1467 (Fed. Cir. 1998) (en banc).

In any case, the other test methods in articles cited by defendants are outside the patent and properly should not be incorporated into the meaning of the claims. Indeed, such "extrinsic evidence" (*e.g.*, expert testimony, technical treatises, and articles, as cited by defendants) is generally disfavored entirely for claims construction purposes, and should be relied on only if the intrinsic evidence is insufficient to construe the claims. *See DeMarini Sports, Inc. v. Worth, Inc.*, 239 F.3d 1314, 1323 (Fed. Cir. 2001). Even then, extrinsic evidence cannot be used to contradict the intrinsic evidence. *Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1309 (Fed. Cir. 1999); *Vitronics*, 90 F.3d at 1584-85; *Markman*, 52 F.3d at 981. The intrinsic evidence is usually sufficient to allow the Court to resolve any ambiguities in the language of the claims. *Vitronics*, 90 F.3d at 1585 ("In most situations, an analysis of the intrinsic evidence alone will resolve any ambiguity in a disputed claim term. In such

circumstances, it is improper to rely on extrinsic evidence."); *see also Chef Am., Inc. v. Lamb-Weston, Inc.*, 358 F.3d 1371, 1374 (Fed. Cir. 2004).

Here, the intrinsic evidence could not be any more clear. The shared specification of the patents expressly defines the test that must be used to determine apparent amylose content (which is the amylose content, as well). Even if defendants' strained reading of the extrinsic evidence supported its position, which it does not, that position is flatly contradicted by the intrinsic record of the specification and should be rejected on that basis alone. There is no tenet of patent law that allows an infringer to define a claim term by importing into its meaning aspects of the prior art (such as numerous test methods) in place of a clear definition from the specification (as with the single test here).

E. Defendants' Definition of "Amylose Content" and "Apparent Amylose Content" Should Be Rejected Since It Would Render those Terms Imprecise

As plaintiffs and defendants both agree, there were many ways to measure amylose in maize starch at the time of plaintiffs' inventions embodied by the '454 and '840 patents. Defendants recite in their brief numerous variations of colorimetric iodine and potentiometric tests. *See* Def. Br. at 4. Against this backdrop of available tests for measuring amylose, the inventors selected and recited a specific colorimetric iodine test in their patents-in-suit to eliminate any ambiguity and to satisfy the duty to claim its invention distinctly. 35 U.S.C. § 112 ¶ 1 ("The specification shall contain a written description of the invention. . . ."); *Gentry Gallery v. Berkline Corp.*, 134 F.3d 1473, 1479 (Fed. Cir. 1998) (the patent's disclosure did not support a broad claim interpretation); *Seattle Box Co., Inc. v. Industrial Crating & Packing, Inc.*, 731 F.2d 818, 826 (Fed. Cir. 1984) ("When a word of degree is used [in a claim] the district court must determine whether the patent's specification provides some standard for measuring that degree.").

Defendants, however, would wipe away all of that certainty and definiteness by "construing" the terms "amylose content" and "apparent amylose content" ambiguously to refer to the amount of amylose measured by any of a variety of colorimetric iodine analyses. *See* Def. Br. at 11. In short, defendants are asking the court to assign an open-ended, ambiguous, and legally inoperative meaning to the claims of the '454 and '840 patent claims, one which they no doubt will seek to exploit later on to argue they do not infringe those claims. That effort should be cut off now, at the construction step, so that the infringement determination can be made from a solid, proper foundation. Indeed, courts should "construe claim terms in order to assign a fixed, unambiguous, legally operative meaning to the claim." *Chimie*, 402 F.3d. at 1377 (*quoting Liquid Dynamics Corp. v. Vaughan Co., Inc.*, 355 F.3d 1361, 1367 (Fed. Cir. 2004)); *Rhine v. Casio, Inc.*, 183 F.3d 1342, 1345 (Fed. Cir. 1999).

III. CONCLUSION

For all of the above reasons, the asserted claims of the '454 and '840 patents should be construed to have their ordinary and accustomed meanings to one of ordinary skill in the art, with the terms "amylose content" and "apparent amylose content" construed in that regard to mean the apparent amylose content determined in the patent by one of such skill (*i.e.*, in columns 3 and 4 using the Blue Value colorimetric iodine analysis there).

Respectfully submitted,

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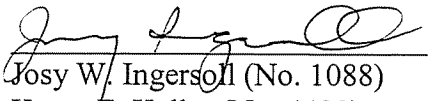

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CERTIFICATE OF SERVICE

I, Andrew A. Lundgren, Esquire, hereby certify that on October 7, 2005, I caused to be electronically filed a true and correct copy of the foregoing document with the Clerk of the Court using CM/ECF, which will send notification that such filing is available for viewing and downloading to the following counsel of record:

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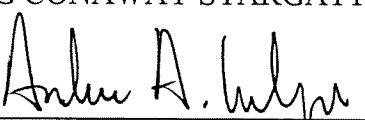

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